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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,568	12/21/2001	Man Ho Na	K-0371	3651

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FLESHNER & KIM, LLP  
14500 AVION PARKWAY, SUITE 125  
CHANTILLY, VA 20151

EXAMINER

LANDAU, MATTHEW C

ART UNIT PAPER NUMBER

2815

DATE MAILED: 03/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/024,568

Applicant(s)

NA ET AL.

Examiner

Matthew Landau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the second fly eye lens refracting the beams from the first fly eye lens into parallel beams and the first center point of the first lens cell located at a point a distance away from a center axis of the first lens cell must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claims 2, 3, and 7 objected to because of the following informalities: claims 2 and 7 contain the limitation “the first lens cell”. There is insufficient antecedent basis for this limitation in the claims. It is suggested the limitation be changed to read “each [the] first lens cell”. Note claim 2 has a similar problem.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to claims 1 and 7, it is unclear how the second fly eye lens refracts the beams from the first fly eye lens into parallel beams. It is unclear how this limitation structurally distinguishes the claimed invention.

In regards to claim 2 and 7, it is unclear how a first center point of a cell can be located at a point a distance away from a center axis of that cell. A center point must fall on an axis that runs through a center of a cell.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by the admitted prior art.

In regards to claim 1, Figures 1 and 2 of the instant application disclose and illumination system in a liquid crystal projector comprising: a light source 2, a first fly eye lens 4 having first lens cells each with a first center point, and second lens cells each with a second center point disposed in outer parts of the first lens cells, for receiving beams of lights from the light source in correspondence to the first center points of the first lens cells and the second center points of the second lens cells, respectively; and a second fly eye lens having a plurality of lens cells for refracting the beams from the first fly eye lens into parallel beams. Note that the first lens cells are considered to be the 4 cells in the vicinity of the center of first fly eye lens (see Figure 1) and the second lens cells are considered to be the cells surrounding those first lens cells.

In regards to claim 2, as best the examiner can ascertain, Figure 2 of the instant application discloses the first center point of each first lens cell is located at a point a distance away from the a center axis of the first lens cell, on which the beam from the light source is incident.

In regards to claim 3, Figure 2 of the instant application discloses the second center points of each second lens cell is located at the center axis of the second lens cell.

In regards to claim 4, Figure 1 of the instant application discloses the first lens cells are arranged in a center part of the first fly eye lens along a height direction center line of the first fly eye lens.

In regards to claim 5, Figure 1 of the instant application discloses the first lens cells are arranged in a center part of the first fly eye lens along a width direction center line of the first fly eye lens.

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In regards to claim 6, Figure 1 of the instant application discloses the first lens cells are arranged in a radial direction centered on a center of the first fly eye lens.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Jung (US Pat. 6,144,420, hereinafter Jung).

In regards to claim 7, Figures 1 and 2 of the instant application disclose an illumination system in a liquid crystal projector comprising: a parabolic reflector 2B for making total reflection of the beams from the lamp to direct the beams in one direction; a first fly eye lens 4 having first lens cells each with a center point shifted a distance away from a center axis of the first lens cell, and second lens cells each with a center point at the center axis of the second lens cell disposed in outer parts of the first lens cells, for receiving the beams reflected at the parabolic reflector in correspondence to the center points of the first lens cells and the second lens cells; and a second fly eye lens 6 having a plurality of lens cells for reflecting the beams from the first fly eye lens into parallel beams. Note that the first lens cells are considered to be the 4 cells in the vicinity of the center of first fly eye lens (see Figure 1) and the second lens cells are considered to be the cells surrounding those first lens cells. The difference between the

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admitted prior art and the claimed invention is an arc lamp for emitting beams of lights by arc emission. Figure 1 of Jung discloses an arc lamp 11 used in a projection system. In view of such teaching, it would have been obvious to the ordinary artisan at the time the invention was made to modify the invention of the admitted prior art by using an arc lamp as the light source. The ordinary artisan would have been motivated to modify the admitted prior art in the manner described above for the purpose of selecting a light source with adequate intensity.

In regards to claim 8, Figure 1 of the instant application discloses the first lens cells are arranged in a center part of the first fly eye lens along a height direction center line of the first fly eye lens.

In regards to claim 9, Figure 1 of the instant application discloses the first lens cells are arranged in a center part of the first fly eye lens along a width direction center line of the first fly eye lens.

In regards to claim 10, Figure 1 of the instant application discloses the first lens cells are arranged in a radial direction centered on a center of the first fly eye lens.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kakuda et al. and Fukuda et al. both disclose lens cells wherein the optical axis of the lens cells is shifted from center points of the lens cells.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Landau whose telephone number is (703) 305-4396.

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The examiner can normally be reached from 8:00 AM-4: 30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (703) 308-1690. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



**EDDIE LEE**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**

Matthew C. Landau

Examiner

February 26, 2003